



Safety Data Sheet

Cat. # RC-085

PVP (Polyvinylpyrrolidone)

Size: 500g





PVP (Polyvinylpyrrolidone)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 01/01/2017

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Version: 7.1

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Substance name	: PVP (Polyvinylpyrrolidone)
Chemical name	: PVP (Polyvinylpyrrolidone)
CAS-No.	: 9003-39-8
Product code	: 622P
Formula	: (C ₆ H ₉ NO) _n
Synonyms	: 143 RP / 1-ethenyl-2-pyrrolidinone polymers / 1-ethenyl-2-pyrrolidinone, polymers / 1-ethenyl-2-pyrrolidinone, polymer / 1-vinyl-2-pyrrolidinone, polymers / 1-vinyl-2-pyrrolidinone polymers / 2-pyrrolidinone, 1-ethenyl, homopolymer / 2-pyrrolidinone, 1-vinyl-, polymers / agent AT 717 / agrimer / albigen A / aldacol Q / AT 717 / bolinan / ganex P 804 / hemodesis / hemodez / Hueper's polymer No. 1 / Hueper's polymer No. 2 / Hueper's polymer No. 3 / Hueper's polymer No. 4 / Hueper's polymer No. 5 / Hueper's polymer No. 6 / Hueper's polymer No. 7 / K 115 / K 115 (polyamide) / K 115, polyamide / K 15 / K 25 / K 25 (polymer) / K 25, polymer / K 30 / K 30 (polymer) / K 30, polymer / K 60 / K 60 (polymer) / K 60, polymer / K 90 / kollidon / kollidon 17 / kollidon 25 / kollidon 30 / luviskol / luviskol K 17 / luviskol K 25 / luviskol K 30 / MPK 90 / neocompensan / N-vinyl, polymer / N-vinylbutyrolactam polymer / N-vinylbutyrolactam, polymer / N-vinylpyrrolidinone polymer / N-vinylpyrrolidinone, polymer / N-vinylpyrrolidone polymer / N-vinylpyrrolidone, polymer / P.V.P / peragal ST / peregol ST / periston / periston-N / peviston / plasdon K-26/28 / plasdon XL / plasdone / plasdone C / plasdone K 29-32 / plasmosan / poly(1-(2-oxo-1-pyrrolidinyl)ethylene) / poly(1-vinyl-2-pyrrolidinone), homopolymer / poly(1-vinyl-2-pyrrolidinone)Hueper's polymer No.1 / poly(1-vinyl-2-pyrrolidinone)Hueper's polymer No.2 / poly(1-vinyl-2-pyrrolidinone)Hueper's polymer No.3 / poly(1-vinyl-2-pyrrolidinone)Hueper's polymer No.4 / poly(1-vinyl-2-pyrrolidinone)Hueper's polymer No.5 / poly(1-vinyl-2-pyrrolidinone)Hueper's polymer No.6 / poly(1-vinyl-2-pyrrolidinone)Hueper's polymer No.7 / poly(1-vinylpyrrolidinone) / poly(N-vinylbutyrolactam) / poly(N-vinylpyrrolidinone) / poly(vinylpyrrolidinone) / poly(vinylpyrrolidone) / polyclar AT / polyclar H / polyclar L / POLYVIDONE / polyvinylpyrrolidone K 12 / polyvinylpyrrolidone K 15 / polyvinylpyrrolidone K 25 / polyvinylpyrrolidone K 30 / polyvinylpyrrolidone K 60 / polyvinylpyrrolidone K 90 / polyvinylpyrrolidone, special grade / povidone / povidone (usp xix) / povidone, usp xix / protagent / PVP / PVP 1 / PVP 2 / PVP 3 / PVP 4 / PVP 5 / PVP 6 / PVP 7 / PVP-10 / PVP-360 / PVP-40 / PVP-40T / PVP-k 15 / PVP-k 30 / PVP-k 60 / PVP-k 90 / PVPP / RP 143 / subtosan / vinisil / vinylpyrrolidinone polymer / vinylpyrrolidinone, polymer / vinylpyrrolidone polymer / vinylpyrrolidone, polymer
BIG No	: 18611

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

PVP (Polyvinylpyrrolidone)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

PVP (Polyvinylpyrrolidone)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
PVP (Polyvinylpyrrolidone)	143 RP / 1-ethenyl-2-pyrrolidinone polymers / 1-ethenyl-2-pyrrolidinone, polymers / 1-ethenyl-2-pyrrolidinone, polymer / 1-vinyl-2-pyrrolidinone, polymers / 1-vinyl-2-pyrrolidinone polymers / 2-pyrrolidinone, 1-ethenyl, homopolymer / 2-pyrrolidinone, 1-vinyl-, polymers / agent AT 717 / agrimer / albigen A / aldacol Q / AT 717 / bolinan / ganex P 804 / hemodesis / hemodez / Hueper's polymer No. 1 / Hueper's polymer No. 2 / Hueper's polymer No. 3 / Hueper's polymer No. 4 / Hueper's polymer No. 5 / Hueper's polymer No. 6 / Hueper's polymer No. 7 / K 115 / K 115 (polyamide) / K 115, polyamide / K 15 / K 25 / K 25 (polymer) / K 25, polymer / K 30 / K 30 (polymer) / K 30, polymer / K 60 / K 60 (polymer) / K 60, polymer / K 90 / kollidon / kollidon 17 / kollidon 25 / kollidon 30 / luviskol / luviskol K 17 / luviskol K 25 / luviskol K 30 / MPK 90 / neocompensan / N-vinyl, polymer / N-vinylbutyrolactam polymer / N-vinylbutyrolactam, polymer / N-vinylpyrrolidinone polymer / N-vinylpyrrolidinone, polymer / N-vinylpyrrolidone polymer / N-vinylpyrrolidone, polymer / P.V.P / peragal ST / peregal ST / periston / periston-N / peviston / plasdon K-26/28 / plasdon XL / plasdone / plasdone C / plasdone K 29-32 / plasmosan / poly(1-(2-oxo-1-pyrrolidinyl)ethylene) / poly(1-vinyl-2-pyrrolidinone), homopolymer / poly(1-vinyl-2-pyrrolidinone) Hueper's polymer No.1 / poly(1-vinyl-2-pyrrolidinone) Hueper's polymer No.2 / poly(1-vinyl-2-pyrrolidinone) Hueper's polymer No.3 / poly(1-vinyl-2-pyrrolidinone) Hueper's polymer No.4 / poly(1-vinyl-2-pyrrolidinone) Hueper's polymer No.5 / poly(1-vinyl-2-pyrrolidinone) Hueper's polymer No.6 / poly(1-vinyl-2-pyrrolidinone) Hueper's polymer No.7 / poly(1-vinylpyrrolidinone) / poly(N-vinylbutyrolactam) / poly(N-vinylpyrrolidinone) / poly(vinylpyrrolidinone) / polyclar AT / polyclar H / polyclar L / POLYVIDONE / polyvinylpyrrolidone K 12 / polyvinylpyrrolidone K 15 / polyvinylpyrrolidone K 25 / polyvinylpyrrolidone K 30 / polyvinylpyrrolidone K 60 / polyvinylpyrrolidone K 90 / polyvinylpyrrolidone, special grade / povidone / povidone (usp xix) / povidone, usp xix / protagent / PVP / PVP 1 / PVP 2 / PVP 3 / PVP 4 / PVP 5 / PVP 6 / PVP 7 / PVP-10 / PVP-360 / PVP-40 / PVP-40T / PVP-k 15 / PVP-k 30 / PVP-k 60 / PVP-k 90 / PVPP / RP 143 / subtosan / vinitil / vinylpyrrolidinone polymer / vinylpyrrolidinone, polymer / vinylpyrrolidone polymer / vinylpyrrolidone, polymer	(CAS-No.) 9003-39-8		Not classified

PVP (Polyvinylpyrrolidone)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
- First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
- First-aid measures after skin contact : Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.
- First-aid measures after eye contact : Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
- First-aid measures after ingestion : Rinse mouth with water. Consult a doctor/medical service if you feel unwell. Victim is fully conscious: immediately induce vomiting. Ingestion of large quantities: immediately to hospital. Call Poison Information Centre (www.big.be/antigif.htm).

4.2. Most important symptoms and effects (acute and delayed)

- Potential Adverse human health effects and symptoms : Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). Not irritant to skin. Not irritant to respiratory organs. Slightly irritant to eyes.
- Symptoms/effects after ingestion : AFTER INGESTION OF HIGH QUANTITIES: Diarrhoea.
- Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Lung tissue affection/degeneration. Enlargement/affection of the liver.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam.
- Unsuitable extinguishing media : Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

5.2. Specific hazards arising from the chemical

- Fire hazard : DIRECT FIRE HAZARD: Not easily combustible. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard. May build up electrostatic charges: risk of ignition.
- Explosion hazard : DIRECT EXPLOSION HAZARD: Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD: Dust cloud can be ignited by a spark.

5.3. Special protective equipment and precautions for fire-fighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
- Firefighting instructions : Dilute toxic gases with water spray.
- Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.
- Emergency procedures : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames.
- Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. In case of dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

PVP (Polyvinylpyrrolidone)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Provide equipment/receptacles with earthing. Powdered form: no compressed air for pumping over spills.
- Methods for cleaning up : Stop dust cloud by humidifying. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid raising dust. Take precautions against electrostatic charges. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Powdered form: no compressed air for pumping over. Keep container tightly closed.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.
- Storage temperature : 20 °C
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. reducing agents.
- Storage area : Store in a dry area. Store in a dark area. Provide the tank with earthing. Keep only in the original container. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: synthetic material.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

PVP (Polyvinylpyrrolidone) (9003-39-8)

USA - ACGIH - Occupational Exposure Limits

ACGIH TWA (mg/m ³)	3 mg/m ³ (Respirable fraction)
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8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Materials for protective clothing:

GIVE GOOD RESISTANCE: synthetic material. rubber

Hand protection:

Gloves

Eye protection:

Safety glasses. In case of dust production: protective goggles

Skin and body protection:

PVP (Polyvinylpyrrolidone)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Protective clothing

Respiratory protection:

Dust formation: dust mask

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Solid. Amorphous powder.
Color	: Off-white to light yellow
Odor	: Characteristic odour Mild odour
Odor threshold	: No data available
pH	: 3 - 7 (5 %)
Melting point	: 130 °C
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: > 250 °C
Relative evaporation rate (butyl acetate=1)	: 0
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: < 0.1 hPa (20 °C)
Relative vapor density at 20 °C	: Not applicable
Relative density	: 1.2 - 1.3
Specific gravity / density	: 1230 - 1290 kg/m ³
Solubility	: Soluble in water. Soluble in ethanol. Soluble in chloroform. Soluble in chlorinated hydrocarbons. Water: > 30 g/100ml
Log Pow	: No data available
Auto-ignition temperature	: 420 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

VOC content	: 0 %
Other properties	: Hygroscopic. Acid reaction. May generate electrostatic charges.

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions. Hygroscopic.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

PVP (Polyvinylpyrrolidone)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

PVP (Polyvinylpyrrolidone) (9003-39-8)	
LD50 oral rat	100000 mg/kg (Rat, Oral)
LD50 dermal rat	> 12000 mg/kg (Rat, Dermal)
ATE US (oral)	100000 mg/kg body weight

Skin corrosion/irritation : Not classified
pH: 3 - 7 (5 %)

Serious eye damage/irritation : Not classified
pH: 3 - 7 (5 %)

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Potential Adverse human health effects and symptoms : Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). Not irritant to respiratory organs. Slightly irritant to eyes.

Symptoms/effects after ingestion : AFTER INGESTION OF HIGH QUANTITIES: Diarrhoea.

Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Lung tissue affection/degeneration. Enlargement/affection of the liver.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Not harmful to fishes. Mild water pollutant (surface water). Not harmful to activated sludge.

PVP (Polyvinylpyrrolidone) (9003-39-8)	
LC50 fish 1	> 10000 mg/l (96 h, Leuciscus idus)

12.2. Persistence and degradability

PVP (Polyvinylpyrrolidone) (9003-39-8)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

PVP (Polyvinylpyrrolidone) (9003-39-8)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

PVP (Polyvinylpyrrolidone)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 13: Disposal considerations

13.1. Disposal methods

- Waste treatment methods : Waste treatment methods.
- Product/Packaging disposal recommendations : Recycle/reuse. Remove to an authorized dump. Remove to an authorized incinerator with energy recovery. Precipitate/make insoluble.
- Additional information : Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

PVP (Polyvinylpyrrolidone) (9003-39-8)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

PVP (Polyvinylpyrrolidone) (9003-39-8)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

EU-Regulations

National regulations

No additional information available

15.3. US State regulations

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 05/11/2017

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.